

Conference on Energy Development in the Greater Mekong Subregion

Implementation Plans II Cambodian Power Transmission Plans

Ministry of Industry, Mines and Energy

Phnom Penh, Cambodia, 29-30 September, 2009

Energy Policy

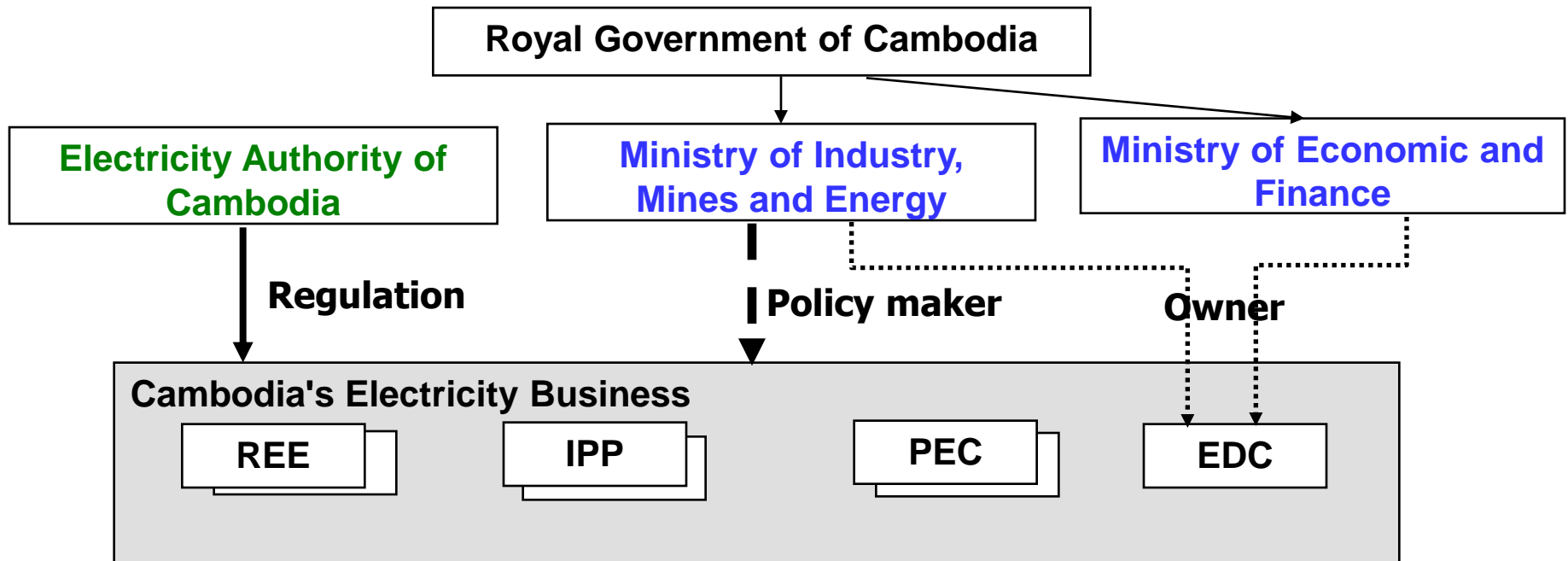
To provide an adequate supply of energy throughout Cambodia at reasonable and affordable price,

To ensure a reliable and secured electricity supply at reasonable prices, which facilitates the investments in Cambodia and developments of the national economy,

To encourage exploration and environmentally and socially acceptable development of energy resources needed for supply to all sectors of Cambodia economy,

To encourage the efficient use of energy and to minimize the detrimental environmental effects resulted from energy supply and consumption.

Current Structure of Electricity Sector



-➔ Ownership of EDC
- - - ➔ Policy; Planning; Development; Technical standard
- ➔ Tariff, license, finances and performance; Enforce the regulations, rules and standards

Cambodia Power Transmission Strategy

A- Development of Transmission

B- Power trade with neighboring countries

C- Provincial and Rural Electrification Program

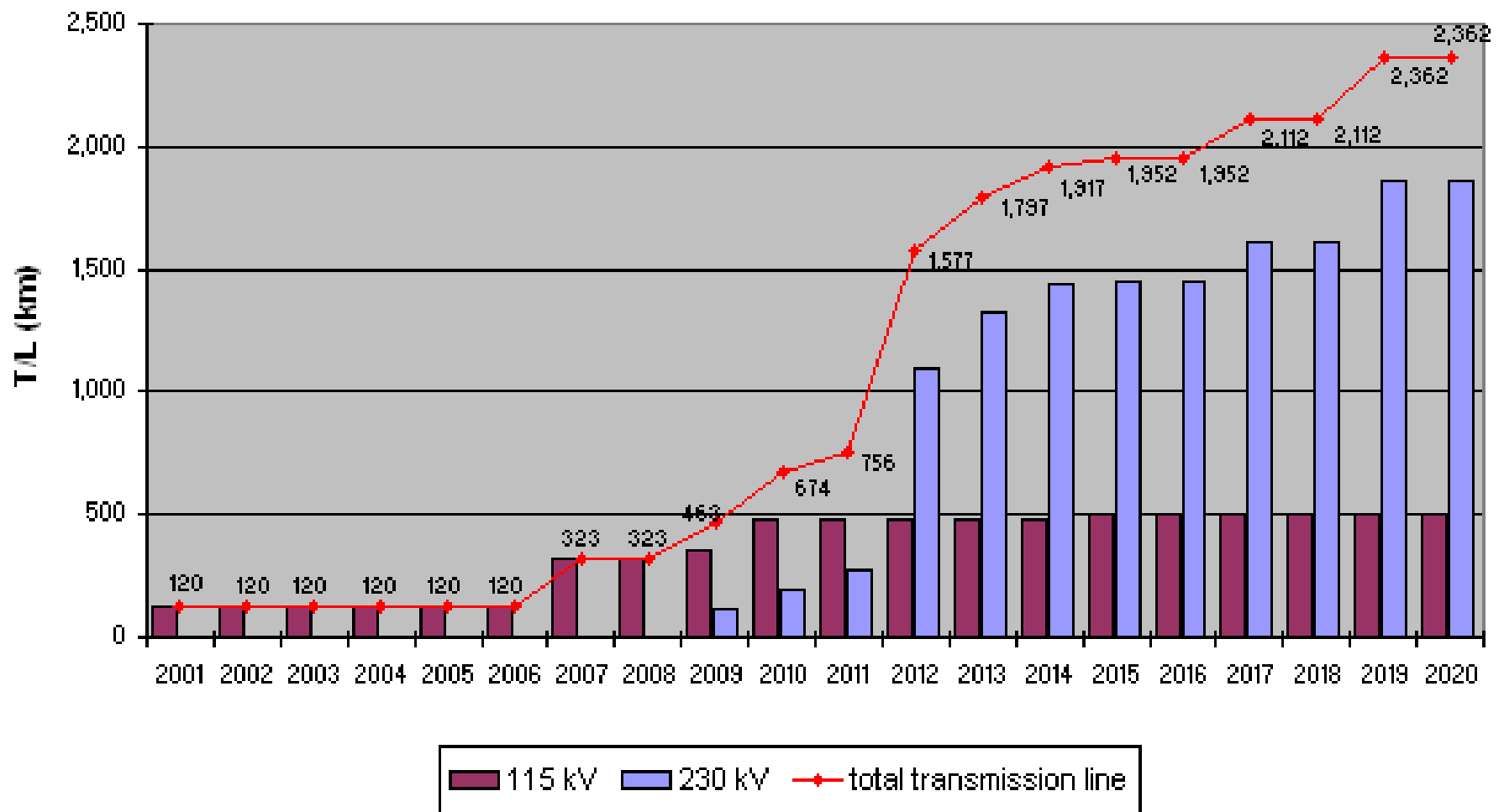
A-Transmission

- 115 kV BOT interconnecting with Thailand to supply Banteay Meanchey, Siem Reap and Battambang
- 115 kV Vietnam (Tai Ninh) - Kampong Cham, BOT (2011)
- 115 kV Lao (Ban Hat) - Stung Treng, WB (2011)
- 230 kV Phnom Penh - Kampong Cham, BOT (2012)
- 230 kV Phnom Penh Battambang via Kompong Chhnang-Pursat, BOT(2012)
- 220 kV Phnom Penh Viet Nam via Takeo ,ADB+NDF (2009)
- 230 kV Takeo – Kampot, KfW (2011)
- 230 kV Kampot – Sihanoukville , ADB+JBIC (2011)

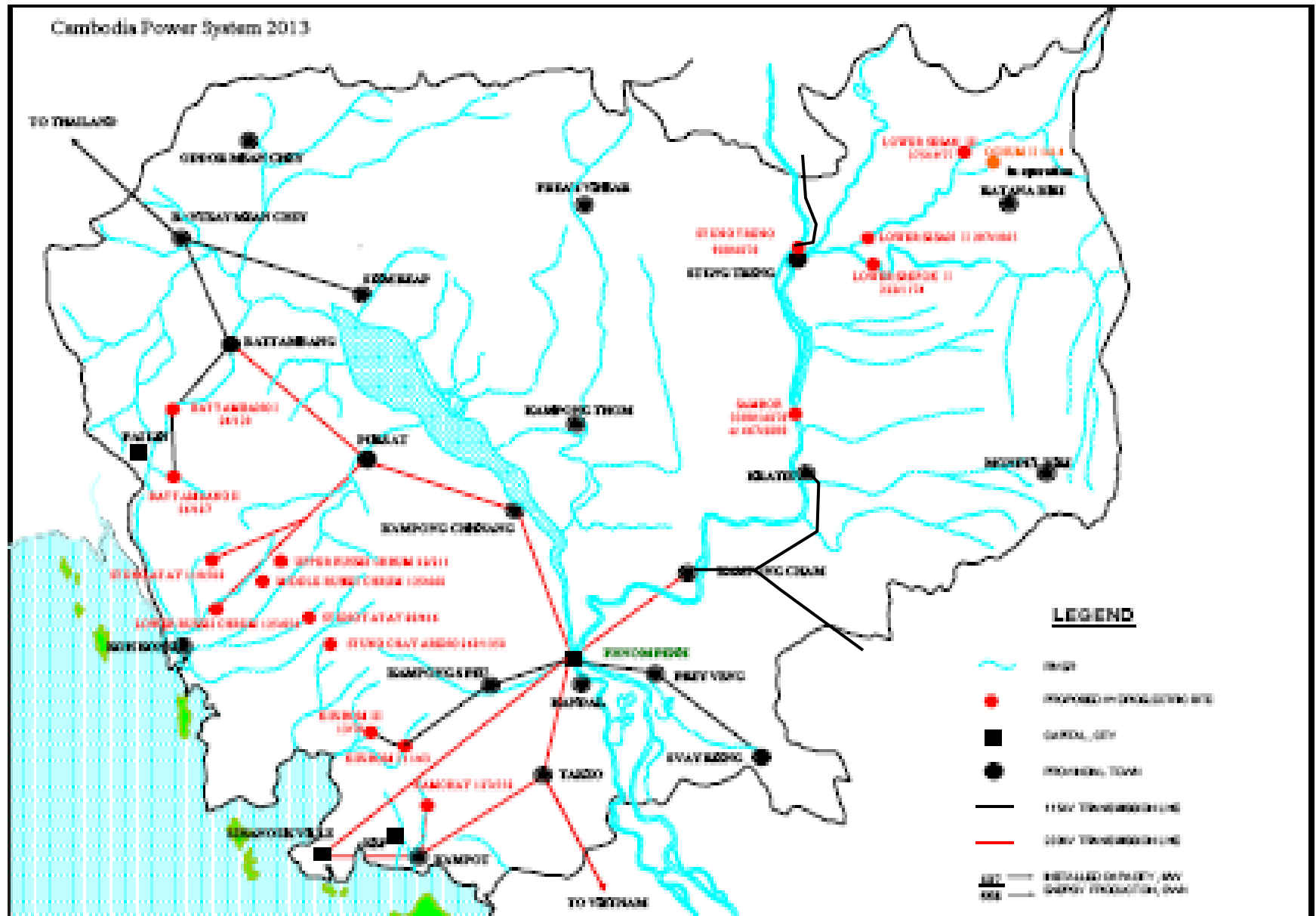
No.	Existing Transmission and Expansion Plan	Year Operation	T/L (km)
1	115 kV, Kirirom I - Phom Penh, BOT	2001	120
2	115 kV, Thailand - Bantey Meanchey - Siem Reap – Battambang, BOT	2007	203
3	220 kV, Phnom Penh - Takeo - Viet Nam, (construct the substation in Takeo), (ADB + NFD)	2009	110
4	115 kV, Reinforcement of transmission line and construct substation at WPP (West Phnom Penh), (WB)	2009	30
5	230 kV, Takeo - Kompot, (construct substation in Kompot), (KFW)	2011	87
6	115 kV, Steung Treng - Loa PDR, (construct substation in Steung Treng), (WB)	2011	56
7	110 kV, Kampong Cham - Viet Nam, Substations: Soung, - Pongnearkreak BOT	2011	68
8	230 kV, Kampot - Sihanouk Ville, (construct 2 substations: - Vealrinh - Sihanouk Ville), (ADB + JBIC)	2011	82
9	230 kV, Phnom Penh - Kompong Chhnang - Pursat - Battambang, (construct 3 substations: - Kompong Chhnang, - Pursat, - Battambang), BOT	2012	310
10	230 kV, Pursat - Osom, (construct 1 substation in Osom Commune), BOT	2012	175
11	230 kV, Kampong Cham – Kratie, BOT	2012	110

No.	Existing Transmission and Expansion Plan (Con.)	Year Operation	T/L (km)
12	230 kV, Kratie – Stung Treng, (India)	2012	126
13	230 kV, Phnom Penh – Kampong Cham, BOT	2012	100
14	220 kV, Phnom Penh – Sihanoukville, along national road 4, BOT	2013	220
15	230 kV, Phnom Penh – Neakleung – Svay Rieng, (construct 2 substations: - Neakleung, - Svay Rieng), BOT	2014	120
16	230 kV, Stung Tatay Hydro – Osom substation, BOT	2015	15
17	115 kV, West Phnom Penh – East Phnom Penh (construct substation GS4 at South Phnom Penh), BOT	2015	20
18	230 kV, Reinforcement of transmission line on the existing pole, Phnom Penh – Kampong Cham (transmit power from Lower Sesan II + Lower Srepok II)	2017	100
19	230 kV, Stung Chay Areng - Osom substation, BOT	2017	60
20	230 kV, Kampong Cham - Kampong Thom - Siem Reap, (construct 1 substation in Kampong Thom), BOT	2019	250
Total Transmission Line			2,362

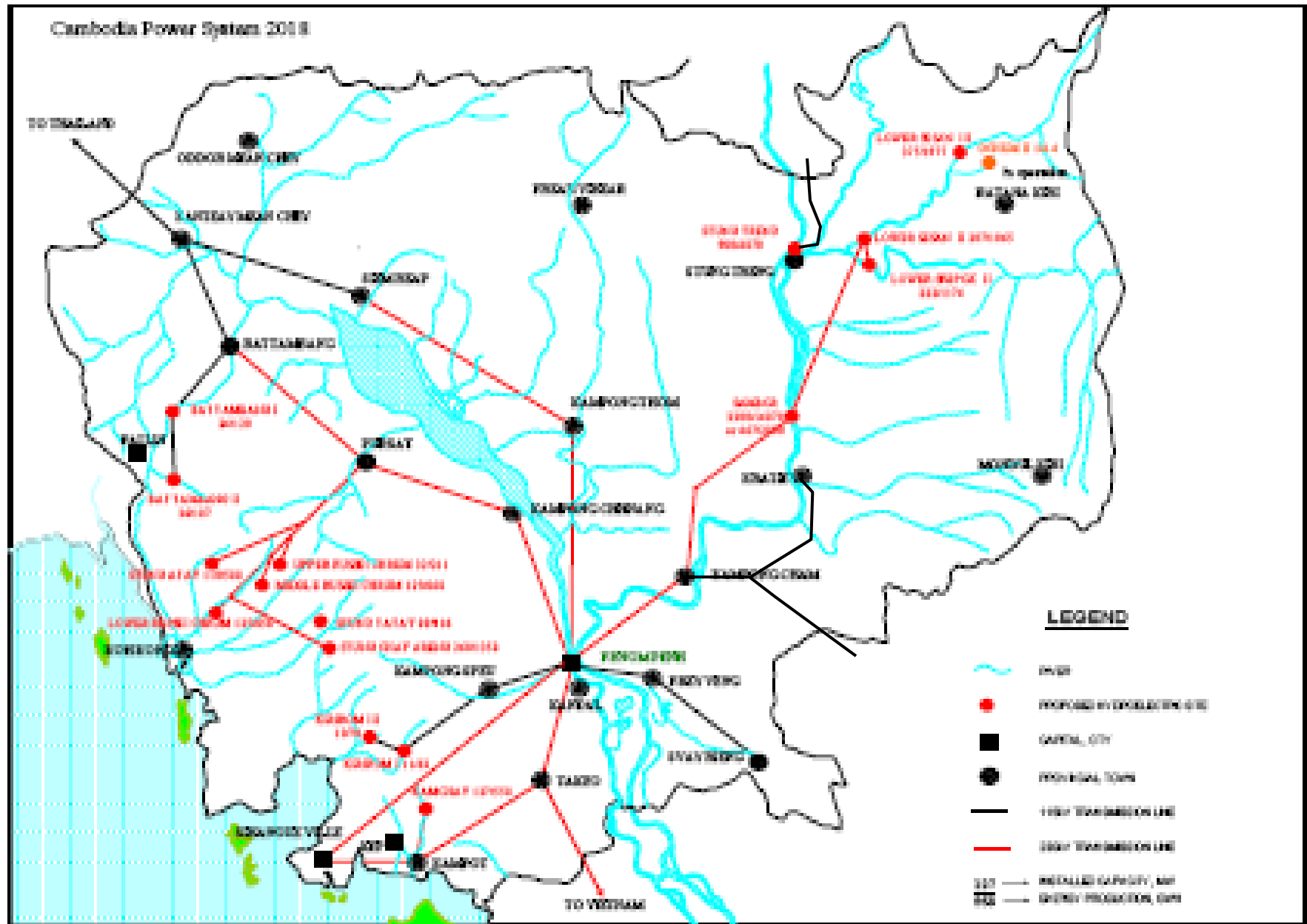
Transmission Expansion Plan (2001 – 2020)



Cambodia Transmission 2013

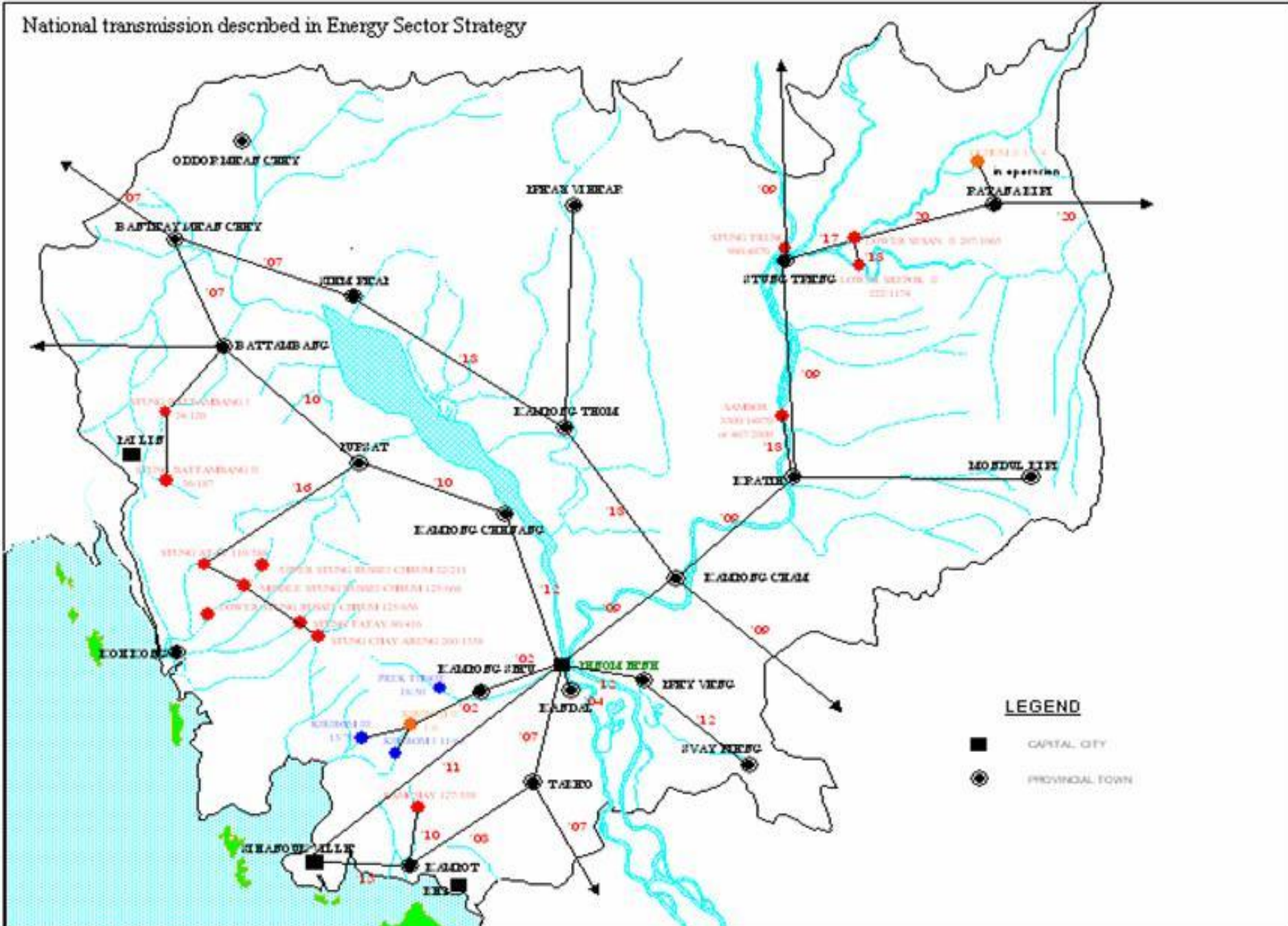


Cambodia Transmission 2018



LEGEND

- CAPITAL CITY
- PROVINCIAL TOWN



B-Power Trade

- Import from Vietnam at High voltage 220 kV with capacity of 200 MW by 2009
- Import from Thailand at 115 kV starting November 2007 to serve northern grid up to 80 MW
- Import from Vietnam to Kampong Cham Province at high voltage 115 kV with capacity of 20 MW by 2011
- Import from Lao to Stung Treng Province at 115 kV with capacity until 20 MW by 2011
- Power Interconnection at high voltage 500 kV, Lao - Cambodia – Vietnam, ADB (2018)
- 10 Cross border MV links from Vietnam and 8 from Thailand at 22 kV to serve Cambodian communities close to the border.

C-Provincial and Rural Electrification

- Completion rehabilitation of 8 provincial towns supported by ADB (\$18.6 mil.) and AFD (€3.75 mil.),
- Grid extension & Rural Elect. Program: WB SDR27.9 mil., GEF \$5.75 mil.
- Renewable energy master plan study and 2 micro hydro development by JICA
- Rural Electrification target:
 - 100% of villages has access to electricity services by 2020
 - 70% of rural population has access to quality electricity services by 2030
- Rural Electrification Fund to subsidize part of rural electrification projects.



End of Presentation



Thank you for your attention.



BCS

